



QD-QA-013  
REVISION G  
EFFECTIVE DATE: October 1, 2004

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# ORGANIZATIONAL INSTRUCTION

## EQUIPMENT CALIBRATION

**OPR(s)**

QD10, QD20, QD30, and  
QD40

**OPR DESIGNEE**

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## DOCUMENT HISTORY LOG

Status (Baseline/ Revision/ Canceled)	Document Revision	Effective Date	Description
Baseline		10/07/97	
Revision	A	11/19/97	Added calibration equipment traceability log. Added requirement to maintain list of QAO equipment. Deleted reference to S&MA-CR30-QA-Y-002.
Revision	B	01/28/99	General Revision.
Revision	C	06/09/99	Changes made to reflect new organization code changes and/or Changes made to reflect new directives renumbering scheme and to incorporate the corrective action for closure of NCR 266
Revision	D	11/30/99	General Revision.
Administrative	N/A	8/28/00	OPR and/or OPR Designee change due to personnel transfer or other administrative reason. No other change to the document has been made.
Revision	E	9/05/02	Format and numbering change to implement requirements of QS-A-001 rev F.
Revision	F	08/18/03	Update reference to organizational title in paragraphs 1.3, 4.2, 4.4, and 4.8. Clarify wording in paragraphs 4.2, 4.3, 4.4, and 4.10. Update methodology for tracking IM&TE in 4.6, 4.7, and 4.8. Delete Appendix A in it's entirety and reference in paragraph 7. Update forms in paragraph 7. Update paragraph 8. for Manual tracking log of equipment usage.
Revision	G	10/01/04	Review to bring document in compliance with the HQ Rules Review Action (CAITS: 04-DA01-0387). Changes were also made to reflect S&MA organizational name changes (i.e., QS toQD).

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## Equipment Calibration

### 1. SCOPE

1.1 Scope. This instruction delineates the responsibilities associated with the use, control, and storage of inspection, measuring and test equipment (IM&TE) used for determining conformance to requirements or acceptance of hardware received at MSFC, produced by MSFC or MSFC on-site contractors.

1.2 Purpose. To implement the requirements of MPR 8730.5.

1.3 Applicability. This instruction applies to equipment assigned to Safety and Mission Assurance (S&MA) inspection personnel.

### 2. DOCUMENTS

#### 2A. APPLICABLE DOCUMENTS

MPR 8730.3 Control of Nonconforming Product

MPR 8730.5 Control of Inspection, Measuring, and Test Equipment

#### 2B. REFERENCE DOCUMENTS

NONE.

### 3. DEFINITIONS

Refer to MPR 8730.5 for applicable definitions.

### 4. INSTRUCTIONS

4.1 IM&TE shall be stored in an environment that shall prevent loss, damage, and degradation.

4.2 Inspection personnel shall verify for all IM&TE used for hardware acceptance that it is operating properly and is within its calibration period prior to use.

4.3 IM&TE found to be malfunctioning or damaged shall be removed from service. A MSFC Tag 15 (Metrology Control Document) shall be completed describing the malfunction or damage and attached to the equipment. The IM&TE shall be delivered to the Calibration (CAL) Lab for service. Any S&MA IM&TE found to be out of calibration shall be removed from

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service and promptly delivered to the S&MA Calibration Contact for documentation on a MSFC FORM 4316 and submission to the Calibration Lab for re-calibration.

4.4 The S&MA Calibration Contact or alternate shall review the calibration recall list from the Calibration Lab monthly to determine the need for IM&TE to be re-calibrated. The Cal Lab's list shall be compared against the S&MA IM&TE database and verified for accuracy.

4.5 IM&TE not used regularly, and for which maintaining calibration is not economically feasible, shall be classified as category II and labeled "calibrate before use for acceptance", or will be segregated in a storage area marked "instruments stored here must be calibrated prior to use for acceptance".

4.6 A manual log shall be maintained to track IM&TE which is loaned to MSFC personnel or on-site contractors. When an item is sent to the Cal Lab it will be tracked on a MSFC Form 4316.

4.7 Category I IM&TE, which is not compared against a standard prior to and after an inspection, shall have the IM&TE serial number, calibration due date, and work authorizing document (WAD) number recorded on a manual tracking log maintained in the inspection area. Recording this information on the manual log when IM&TE is compared against a calibrated standard is suggested but not mandatory.

4.7.1 If the post-inspection comparison against the standard demonstrates that the IM&TE has drifted or is out of tolerance, then re-inspect using a different IM&TE. The new IM&TE serial number and calibration due date shall be recorded on the applicable WAD and the manual log per 4.7.

4.8 If the Cal Lab notifies S&MA that submitted IM&TE equipment was received in an out of tolerance condition, the calibrated equipment manual tracking log shall be reviewed to determine if hardware was accepted/inspected using the discrepant IM&TE. For hardware identified in the log, complete a squawk tag (MSFC Tag 6) in accordance with MPG 8730.3 and apply to the hardware until re-inspection or re-test is performed or until the hardware is cleared. Document the decision to re-inspect/retest or not to re-inspect/retest on the squawk tag.

4.9 IM&TE used for indication only shall not be subject to calibration and shall be classified as Category III in accordance with MPG 8730.5.

4.10 Prior to submittal of procurement requests for new IM&TE, S&MA personnel shall notify the Calibration Facility to determine requirements for calibration or feasibility of calibration. S&MA personnel shall ensure that all newly purchased equipment requiring calibration is forwarded through the Cal Contact to the Cal Lab along with the manufacturer's documentation concerning operation and/or calibration.

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4.11 An S&MA IM&TE database shall be maintained detailing the following for each S&MA IM&TE item: control number (if assigned), manufacturer, model number, nomenclature, serial number and category.

## 5. NOTES

5.1 This issuance replaces QS-QA-013, Revision F, Equipment Calibration, dated 08/12/03.

5.2 Quality records required by reference documents shall be maintained per the parent document.

## 6. SAFETY PRECAUTIONS AND WARNING NOTES

None.

## 7. APPENDICES, DATA, REPORTS, AND FORMS

MSFC Tag 15 Metrology Control Document

MSFC FORM 4316 Metrology Control Document

## 8. RECORDS

Record	Repository	Period of Time
Calibration List	QARC Database	Indefinite per records plan NRRS 5/31A.2
MSFC Form 4316	QARC Manual Tracking Log For Category IM&TE	2 years

## 9. TOOLS, EQUIPMENT, AND MATERIALS

None.

## 10. PERSONNEL TRAINING AND CERTIFICATION

None.

## 11. FLOW DIAGRAM

None